Remarks

Claims 1-20 are currently pending in the patent application. Applicant respectfully submits that the claimed invention is allowable over the cited references.

The Office Action dated December 17, 2007 indicated the following rejections: claims 1-5, 7-8, 12-18 and 20 stand rejected under 35 U.S.C. § 102(b) over Trinh (U.S. 5,204,637); claim 6 stands rejected under 35 U.S.C. § 103(a) over Trinh in view of Ichikawa (U.S. Patent No. 6,532,357); claims 9-10 and 19 stand rejected under 35 U.S.C. § 103(a) over Trinh in view of Nishihori (U.S. Patent No. 6,134,424); and claim 11 stands rejected under 35 U.S.C. § 103(a) over Trinh in view of Kurokawa (U.S. Patent No. 6,678,507).

Applicant respectfully traverses the § 102(b) rejections of claims 1-5, 7-8, 12-18 and 20 because the cited portions of the Trinh reference fail to correspond to all of the claimed limitations. For example, the cited portions of Trinh do not correspond to claimed limitations directed to reducing the drive level or increasing the supply voltage of the RF power output unit by means of the control signal to operate the output unit below its saturation level, thereby preserving linearity of a RF power amplifier. Trinh appears to teach or suggest nothing regarding operating an output unit below its saturation level to preserve linearity. Rather, Trinh discloses a conventional bias control loop that adjusts a bias level of a driver to account for detected voltage levels versus a fixed voltage reference (*see, e.g.* Col. 3:55-57). As such, Trinh appears to provide nothing over the conventional state of the art regarding gain adjustment. Instead, Trinh appears to be primarily directed to a variable coupling network that allows the output of a power amplifier having a wide dynamic range and multiple output levels to be compared with a single fixed voltage reference level. The variable coupling network provides a certain amount of isolation between the output of the power amplifier and a diode power detector to compensate for the voltage level so that a single voltage reference can be used, and to prevent the diode power detector from saturating. Trinh appears to teach or suggest nothing about operating the RF power output unit below its saturation level.

Accordingly, Trinh fails to disclose all the elements recited in Applicant's claims. Applicant therefore submits that the § 102(b) rejection of claims 1-5, 7-8, 12-18 and 20 are improper, and requests that the rejection be withdrawn.

Applicant respectfully traverses the § 103(a) rejection of claim 6 over Trinh in view of Ichikawa. It is admitted in the Office Action that Trinh fails to disclose combining adapting of the output matching circuit and adapting of the supply voltage with power amplifier efficiency optimization in the case of multiple threshold detection. It is alleged that Ichikawa provides such features, and that it would be obvious to combine them with the circuit of Trinh.

Applicant submits that there is no valid reason to make the proposed combination. As discussed above, the Trinh reference is directed to a variable coupling network whose purpose is to isolate power from the power detector, the isolation provided at different levels depending on the operating voltage. This is done to prevent the diode power detector from saturating, and allows the power output to be compared to a single fixed threshold. Ichikawa is proposed to be combined with Trinh for its alleged disclosure of optimization techniques in the case of multiple threshold detection. Applicant submits that one of skill in the art would find no reason to modify the system of Trinh, which is purposefully designed to allow single fixed threshold comparision, to provide optimization techniques in the case of multiple threshold detection. Such a modification runs counter to the teachings of Trinh, and therefore a proper combination cannot be made.

Moreover, Applicant submits that the Ichikawa reference appears to provide nothing that would overcome the underlying deficiencies of the Trinh reference as noted above, and in particular with respect to operating a RF power output unit below its saturation level.

For at least these reasons, Applicant submits that the § 103(a) rejection of claim 6 is improper, and requests that the rejection be withdrawn.

Applicant respectfully traverses the § 103(a) rejection of claims 9, 10 and 19 over Trinh in view of Nishihori. It is admitted in the Office Action that Trinh fails to disclose feeding two control signals to a base-band controller. It is alleged that Nishihori provides such features, and that it would be obvious to combine them with the circuit of Trinh. It is further alleged that Trinh discloses the use of at least two parallel operational amplifiers to produce at least two control signals.

Applicant disagrees with the interpretation that Trinh discloses at least two parallel operational amplifiers to produce at least two control signals. As noted above, Trinh is primarily directed to a variable coupling network that allows a wide dynamic range of

output voltages to be compared to a single threshold. As such, multiple operational amplifiers are not needed, and Applicant has found no such disclosure in Trinh. Because Trinh provides a single threshold, Applicant submits that one of skill in the art would find no reason to combine the alleged teachings of Nishihori with Trinh in a manner that would read on Applicant's claims. Moreover, Applicant submits that the Nishihori reference appears to provide nothing that would overcome the underlying deficiencies of the Trinh reference as noted above, and in particular with respect to operating a RF power output unit below its saturation level.

For at least these reasons, Applicant submits that the § 103(a) rejection of claims 9, 10 and 19 is improper, and requests that the rejection be withdrawn.

Applicant respectfully traverses the § 103(a) rejection of claim 11 over Trinh in view of Kurokawa. Applicant submits that the Kurokawa reference appears to provide nothing that would overcome the underlying deficiencies of the Trinh reference as noted above, and in particular with respect to operating a RF power output unit below its saturation level. For at least this reason, Applicant submits that the § 103(a) rejection of claim 11 is improper, and requests that the rejection be withdrawn.

Applicant further submits that the art of record does not appear to teach or suggest the method of claim 1 or circuit of claim 12 along with the features additionally recited in new claims 21-25, namely that the RF power output unit is a transistor having a base terminal connected to an output terminal of a driver unit providing the drive level, and a collector terminal connected to the supply voltage through an inductance, the output voltage being measured at the transistor collector terminal; and that the threshold voltage is equal to a minimum collector voltage of the transistor.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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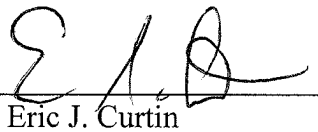
By: 
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